

What is claimed is:

1. A method of evaluating an individual for relative genetic risk for autism, the method comprising determining the individual's genotype at polymorphism sites rs2056202 and/or rs2292813 of the SLC25A12 gene, wherein the presence of a G at either of the two sites indicates 5 an increased risk for autism, and the presence of an increasing number of G's at the sites indicates an increasing risk for autism.
2. The method of claim 1, wherein the genotype are determined by one or more methods selected from the group consisting of single strand conformation polymorphism, denaturing high-performance liquid chromatography, DNA Invader, and polymerase chain 10 reaction amplification followed by sequencing.
3. The method of claim 1, using polymerase chain reaction amplification with at least one primer comprising a sequence selected from the group consisting of SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.
4. A set of two primers suitable for use in polymerase chain reaction, one primer 15 comprising the sequence of SEQ ID NO:5 and the other primer comprising the sequence of SEQ ID NO:6.
5. A set of two primers suitable for use in polymerase chain reaction, one primer comprising the sequence of SEQ ID NO:7 and the other primer comprising the sequence of SEQ ID NO:8.
- 20 6. A kit comprising at least one set of primers suitable for use in polymerase chain reaction (PCR), wherein the set of primers amplifies polymorphism site rs2056202 of the SLC25A12 gene.
7. A kit comprising at least one set of primers suitable for use in polymerase chain 25 reaction (PCR), wherein the set of primers amplifies polymorphism site rs2292813 of the SLC25A12 gene.
8. A kit comprising at least two sets of primers suitable for use in polymerase chain reaction (PCR), wherein one set of primers amplifies polymorphism site rs2056202 of the SLC25A12 gene and the second set of primers amplifies polymorphism site rs2292813 of the SLC25A12 gene.

9. The kit of claim 8, wherein one set of primers consists of a primer comprising the sequence of SEQ ID NO:5 and a primer comprising the sequence of SEQ ID NO:6, and the second set of primers consists of a primer comprising the sequence of SEQ ID NO:7 and a primer comprising the sequence of SEQ ID NO:8.

5 10. The kit of any one of claims 6-9, further comprising instructions for using the two sets of primers to evaluate an individual for relative genetic risk for autism by determining the genotype of the polymorphic sites re2056202 and/or re2292813 of the SLC25A12 gene.

11. A polynucleotide consisting of the sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, and SEQ ID NO:4.

10 12. A method of identifying a form of a genetic polymorphism that is linked to autism, the method comprising identifying a polymorphism in the SLC25A12 gene and determining whether one form of the polymorphism is present in autistic individuals more than another form, wherein the form that is present more often in autism is linked to autism.

13. Use of a genetic polymorphism linked to autism identified by the method of claim 10
15 for evaluating an individual for relative genetic risk for autism.

14. A eukaryotic cell comprising a transgenic human SLC25A12 gene.

15. The eukaryotic cell of claim 12, wherein the transgenic SLC25A12 gene comprises the sequence of SEQ ID NO:2 and/or SEQ ID NO:4.

16. The eukaryotic cell of claim 12, wherein the cell is a yeast cell.

20 17. The eukaryotic cell of claim 12, wherein the cell is a mammalian cell.

18. The eukaryotic cell of claim 12, wherein the cell is a brain cell.

19. The mammalian cell of claim 15, wherein the cell is in a living mammal.

20. A non-human animal comprising the eukaryotic cell of claim 12.

21. The non-human animal of claim 18, wherein the animal is a mammal.

25 22. A method of evaluating whether a compound affects autism, the method comprising contacting the compound with the eukaryotic cell of claim 12 and determining whether the compound affects expression or activity of a product of the SLC25A12 gene, wherein a compound that affects expression or activity of the product of the SLC25A12 gene affects autism.